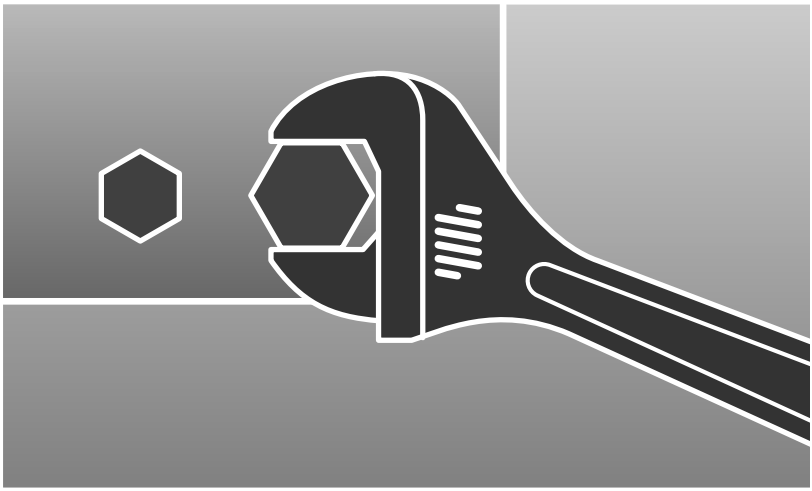
SAMSUNG

INSTALLATION MANUAL

Power Distribution Unit

MCM-B102

System Air Conditioner



Ⓔ DB98-26318A(1)

Safety Precautions

This installation manual explains how to install the power distribution unit.
See the appropriate installation manual for other optional accessories.

⚠ WARNING

- ◆ Read this installation manual carefully before installation and check whether the power distribution unit is installed properly.
- ◆ Do not attempt to install or repair the power distribution unit by yourself.
- ◆ Always consult an authorized service personnel for repair.
- ◆ When moving, consult an authorized service personnel for disconnection and reinstallation of the power distribution unit.
- ◆ Ensure that the wall is strong enough to support the weight of the power distribution unit.
- ◆ The power distribution unit must be installed with the rated power supply.
- ◆ The power distribution unit must be installed according to the national electrical rules by an installation specialist.
- ◆ Consult an authorized installation center on how to dispose the power distribution unit.

⚠ CAUTION

- ◆ Do not use inflammable gases near the power distribution unit.
- ◆ Do not install the power distribution unit in a location where it will come into contact with combustible gases, machine oil, sulphide gas, etc.
- ◆ Avoid a location where acid/alkali solution or special spray is used.
- ◆ Install the power distribution unit in a location that is not exposed to direct sunlight and where the temperature range is between 0°C and 39°C.
- ◆ Do not let water into the power distribution unit.
- ◆ Do not apply pressure to the cable.
  The cable may break and cause fire.
- ◆ Do not press the buttons with a sharp object.
- ◆ Do not connect the power cable to the control terminal.
- ◆ Ensure that the power distribution unit does not affect other electronic devices when installed in a hospital or other particular places.

Contents

◆ POWER DISTRIBUTION UNIT PARTS 4

◆ SYSTEM DIAGRAM 5

◆ INSTALLING THE POWER DISTRIBUTION UNIT 6

◆ SWITCH SETTING OF THE POWER DISTRIBUTION UNIT PCB 7

◆ SETTING THE POWER DISTRIBUTION UNIT

- ■ ENTERING THE SETUP MODE 8
- ■ SELECTING THE SET/FAN MODE 9
- ■ RETURNING TO THE INITIAL MODE 9
- ■ SELECTING THE COMMUNICATION PROTOCOL OF A DIGITAL ELECTRIC METER 10
- ■ ENTERING THE INDOOR UNIT FAN POWER CONSUMPTION 12
- ■ CHANGING THE PASSWORD 15

◆ TEST OPERATION 16

◆ TROUBLESHOOTING FOR COMMUNICATION ERROR . . . 17

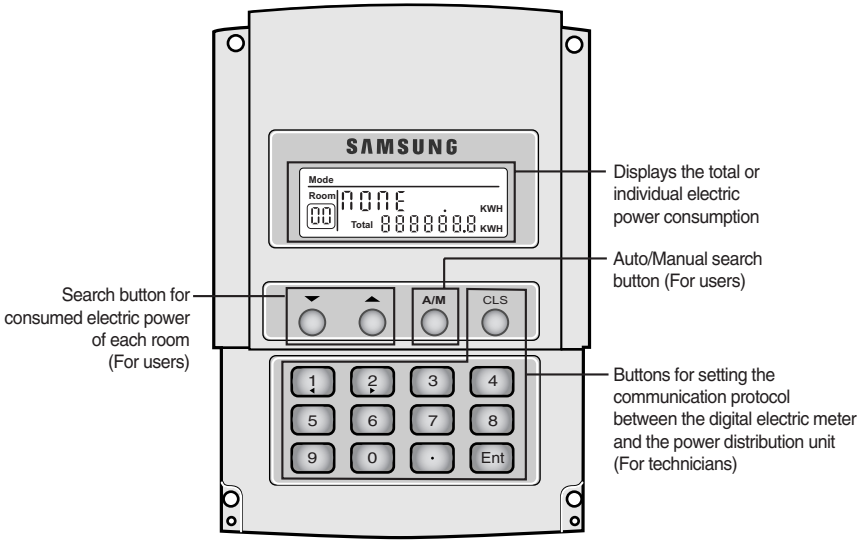
◆ USING THE POWER DISTRIBUTION UNIT 18

◆ INDOOR UNIT FAN POWER CONSUMPTION TABLE 19

◆ SYSTEM SETUP MODE 21

Power distribution unit parts

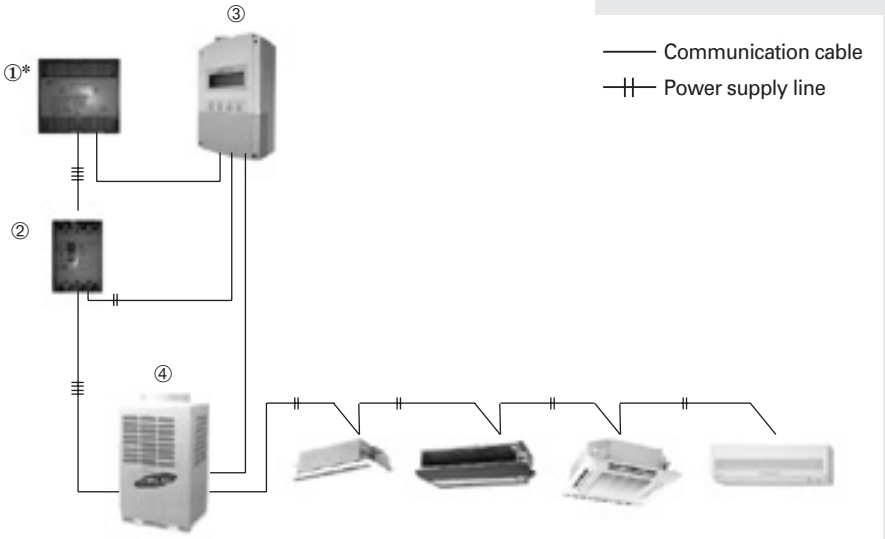
Power distribution unit



CAUTION

- ***The power distribution unit must be installed by an installation specialist.***
- ***Ensure the main power is off before installing the power distribution unit.***
- ***All cables must be installed according to the national wiring regulation and make sure the wires are installed inside the wall to avoid user contact.***

System diagram



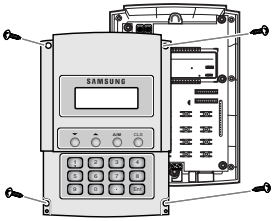
① Digital electric meter(common)

② ELB or NFB :
◆ Interceptor of air conditioners → Main power breaker

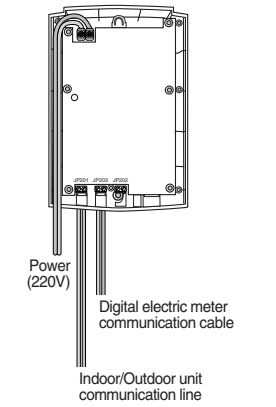
③ Power distribution unit :
◆ MCM-B102

④ DVM air conditioners

Installing the power distribution unit



1 Open the power distribution unit cover.



2 Connect the power cable of the power distribution unit to the power terminal.

3 Connect the communication cable F1, F2 of the indoor and outdoor unit to the power distribution unit terminal JP201.

4 Connect the digital electric meter communication cable to the power distribution unit terminal JP203.

5 Reassemble the power distribution unit.

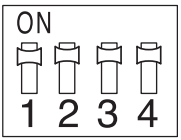
CAUTION

The communication cable and the power cable should be installed separately.

Switch setting of the power distribution unit PCB

Set the DIP switch of the power distribution unit according to the type of digital electric meter to be installed. Adjust the switch as shown in the table below.

	SW1	SW2	SW3	SW4	Remarks
Switch status	ON	ON	OFF	OFF	Use RS 485 communication



SW201

Factory setting of the switch

CAUTION

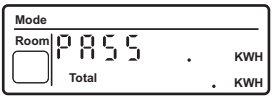
If the DIP switch of the power distribution unit PCB is not adjusted properly, communication error may occur.

Entering the setup mode

Enter the setup mode to set the system environment of the power distribution unit.

1 Press the 9 , 0 , · , Ent buttons on the key-pad of the power distribution unit in sequence.

2 Press the Ent button again when UA17 appears on the display.



3 Press the Ent button after entering the password when PASS appears on the display.

◆ The default password is '0000000'.

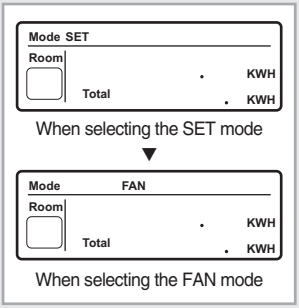
CAUTION

If there are no key inputs for 3 seconds when UA17 appears on the display, the display returns to the initial mode.

Selecting the SET/FAN mode

1 Press the ◯ or ◯ button to select the mode when the setup screen appears.

- ◆ Each time you press the ◯ or ◯ button, you can select the SET/FAN mode.
- ◆ The SET mode is selected by default.



2 You can enter each mode by pressing the Ent button.

Returning to the initial mode

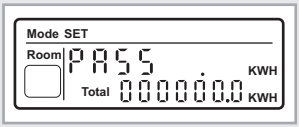
1 Press the 1 or 2 button until 007 appears on the display in the SET/FAN mode and press the Ent button.

- ◆ The mode changes from the SET / FAN mode to the setup mode.

2 Press the ◯ or ◯ button until 007 appears on the display in the setup mode and press the Ent button.

- ◆ The mode changes from the setup mode to the initial mode.

Selecting the communication protocol of the digital electric meter



1 Select the SET mode and press the Ent button after entering the setup mode.

2 Press the 2 button twice when PASS appears on the display.

◆ The default communication protocol setting is '1'.

3 Press the Ent button.

◆ The existing setting of the communication protocol is deleted and you can enter a new setting.

4 Press the Ent button after entering the desired setting of the communication protocol.

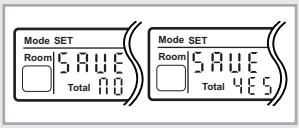
Button(Setting)	1	2	3	7
Communication protocol of a digital electric meter	Omni RS 485	Korea Micronics RS 485	LS Industrial RS 485	Hansuk Tech RS 485

5 Press the 1 or 2 button until SAVE appears on the display.

◆ SAVE appears on the display.

6 Press the Ent button and press the 1 or 2 button.

◆ If you press the Ent button, NO is displayed and if you press the 1 or 2 button, YES is displayed.



7 Press the Ent button.

◆ SAVED is displayed and the setup is saved.

Entering the indoor unit fan power consumption

1 Select the FAN mode and press the Ent button after entering the setup mode.

2 Press the Ent button.

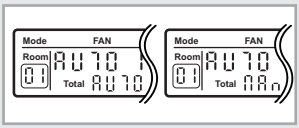
- The existing Room number is deleted and you can enter a new setting.

3 Press the 1 or 2 button to select the desired Room number and press the Ent button.

- The number of Room is 48 from 00 to 47.
- The Room number indicates the indoor unit main address.

4 Press the Ent button after pressing the 2 button.

- The existing power consumption setting is deleted and you can enter a new setting.
- The default power consumption setting is 'Auto'.

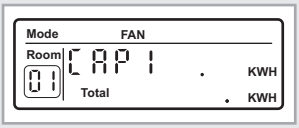


5 Press the 1 or 2 button to select the AUTO or MAn and press the Ent button.

- You do not have to enter the indoor unit power consumption setting when you select 'Auto'.

6 Press the 2 button until CAP 1 appears on the display and press the Ent button.

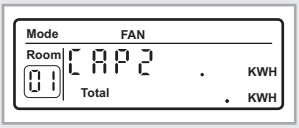
◆ CAP 1 indicates the low fan speed and the existing setting is deleted and you can enter a new setting.



7 Press the Ent button after entering the indoor unit power consumption at low fan mode.

8 Press the 2 button and when CAP2 appears on the display, press the Ent button.

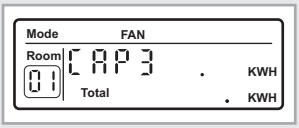
◆ CAP2 indicates the medium fan speed and the existing setting is deleted and you can enter a new setting.



9 Press the Ent button after entering the indoor unit power consumption at medium fan mode.

10 Press the 2 button and when CAP3 appears on the display, press the Ent button.

◆ CAP3 indicates the high fan speed and the existing setting is deleted and you can enter a new setting.



Setting the power distribution unit (Continued)

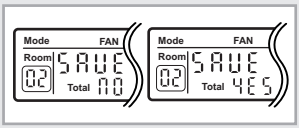
11 Press the Ent button after entering the indoor power consumption at high fan mode.

12 Press the 1 or 2 button until channel is displayed.

◆ Adjust the indoor unit power consumption setting for other Rooms following step 2.

13 Press the 1 or 2 button until SAVE is displayed.

◆ SAVE appears on the display.



14 Press the 1 or 2 button after pressing the Ent button.

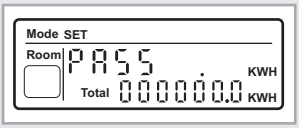
◆ If you press the Ent button, NO is displayed and if you press the 1 or 2 button, YES is displayed.

15 Press the Ent button.

◆ SAVED is displayed on the display and the settings are saved.

Changing the password

1 Press the Ent button after entering the setup mode.



2 Press the Ent button when PASS appears on the display.

◆ The existing password is deleted and you can enter a new password.

3 Press the Ent button after entering new password.

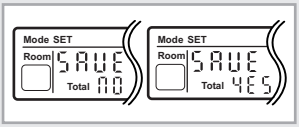
◆ You can set the password up to 7 digits.

4 Press the 2 button 4 times.

◆ SAVE appears on the display.

5 Press the 1 or 2 button after pressing the Ent button.

◆ If you press the Ent button, NO is displayed and if you press the 1 or 2 button, YES is displayed.



6 Press the Ent button.

◆ SAVED is displayed on the display and new password is saved.

Test operation

1 Check if the LCD display turns on after powering on the power distribution unit.

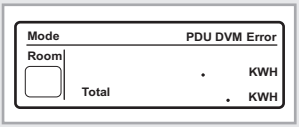
2 Set the communication protocol between the digital electric meter and the power distribution unit.

3 Check the communication status by pressing the or button after completing all the settings for the communication protocol.

4 Check if the total value displayed on the power distribution unit is the same as the digital electric meter's.

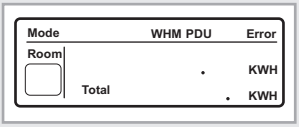
Troubleshooting for communication error

1 When there is a communication error between the DVM air conditioner system and the power distribution unit, the error message will be displayed as shown in the picture.



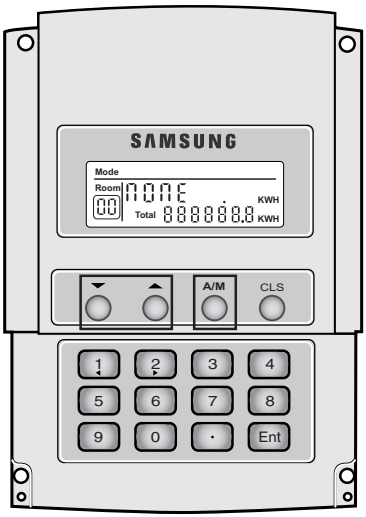
- ◆ Check if the communication cable is connected properly.
- ◆ Check if any errors are displayed on the outdoor unit.

2 When there is a communication error between the digital electric meter and the power distribution unit, the error message will be displayed as shown in the picture .



- ◆ Check if the communication cable is connected properly.
- ◆ Check if the PCB switch of the power distribution unit is set correctly.
- ◆ Check if the communication protocol of the digital electric meter is set properly.

Using the power distribution unit



1 Press the ▼ or ▲ button to select the Room number to check.

◆ Check the power consumption of each indoor unit.

2 Press the A/M to select auto scan or manual scan.

◆ If the auto scan is selected, the consumed power of each room will be scanned automatically and if the manual scan is selected, press the ▼ or ▲ button to select the rooms to check.

Indoor unit fan power consumption table

Type	Indoor unit model	Indoor unit fan power consumption(W)			Remarks
		L(Low)	M(Medium)	H(High)	
1 way cassette	AVMKH020EA4 AVMKC020EA1	35	35	35	
	AVMKH026EA4 AVMKC026EA1	35	35	35	
	AVMKH035EA4 AVMKC035EA1	40	40	40	
2 way cassette	AVXC2H056EA	33	33	33	
	AVXC2H071EA	33	33	33	
	AVMGH052EA4	33	33	33	
	AVMGH070EA4	33	33	33	
4 way cassette	AVMCH052EA4 AVMCC052EA1	56	70	80	
	AVMCH070EA4 AVMCC070EA1	56	70	80	
	AVMCH105EA4 AVMCC105EA1	88	103	121	
	AVMCH128EA4 AVMCC128EA1	104	119	136	
	AVMCH140EA4 AVMCC140EA1	140	150	165	
Duct (Built-in)	AVXDBH071EA	140	155	172	
	AVMBH020EA4 AVMBC020EA0	74	81	89	
	AVMBH026EA4 AVMBC026EA0	74	81	89	
	AVMBH035EA4 AVMBC035EA0	74	81	89	
	AVMBH052EA4 AVMBC052EA0	140	155	172	
	AVMBH070EA4 AVMBC070EA0	140	155	172	

Indoor unit fan power consumption table (Continued)

Type	Indoor unit model	Indoor unit fan power consumption(W)			Remarks
		L(Low)	M(Medium)	H(High)	
Duct (Low-static pressure)	AVMDH052EA4 AVMDC052EA0	150	170	185	
	AVMDH070EA4 AVMDC070EA0	150	170	185	
Duct (High-static pressure)	AVMHH105EA4 AVMHC105EA0	458	486	513	
	AVMHH128EA4 AVMHC128EA0	458	486	513	
	AVMHH140EA4 AVMHC140EA0	458	486	513	
Slim Duct	AVMEH020EA3	68	68	68	
	AVMEH026EA3	68	68	68	
	AVMEH035EA3	68	68	68	
Ceiling	AVMFH052EA4	58	67	75	
	AVMFH070EA4	63	72	80	
Wall-mounted (Prestige)	AVXWHH028EA	35	35	35	
	AVXWHH036EA	35	35	35	
Wall-mounted (Premium)	AVXWPH022EA	32	32	32	
	AVXWPH028EA	32	32	32	
	AVXWPH036EA	35	35	35	
	AVXWPH056EA	72	72	72	
	AVXWPH071EA	85	85	85	
Wall-mounted (Classic)	AVMWH020EA4 AVMWC020EA1	42	42	42	
	AVMWH026EA4 AVMWC026EA1	42	42	42	
	AVMWH035EA4 AVMWC035EA1	42	42	42	
	AVMWH052EA4 AVMWC052EA1	85	85	85	
	AVMWH070EA4 AVMWC070EA1	85	85	85	

System setup mode

Setting mode	Menu	Remarks
SET	PASS	Password setup
	SEL COM	Digital electric meter communication type setup
	SAVE	Save setup
	DEFAULT	Restore default factory settings
	OUT	Exit from the setup mode
FAN	CHAnnEL	Represents the main address of the indoor unit
	AUTO MAn	Selecting the Auto/Manual mode
	CAP1	Indoor unit FAN power consumption setup at L mode
	CAP2	Indoor unit FAN power consumption setup at M mode
	CAP3	Indoor unit FAN power consumption setup at H mode
	SAVE	Save setup
	OUT	Exit from the setup mode

MEMO

ELECTRONICS